

SAGITOV, A.K.

Occurrence of the Siberian bullfinch *Uragus sibiricus sibiricus*
Pall. in the Zeravshan floodplain in winter. *Ornitologia*
no.6:481 '63. (MIRA 17:6)

ILYUZHIN, Ye.S., SAGITOV, A.M.

Improving techniques for investigating flowing wells with a
DGM-4 differential deep-well manometer. Nauch.-tekhn.sbor.po
dob.nefti no. 18:92-96 '62. (MIRA 17:6)

KAMENETSKIY-FEDOROV, S.G.; SAGITOV, A.U.

Rapid method for the investigation of piezometric non-overflowing wells. Nefteprom. delo no.8:8-11 '63. (MIRA 17:4)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

SAGITOV, B.N.

Variation of biomorphological characters in interspecific hybrids of *Gossypium hirsutum* L. and *G. barbadense* L. grown in different soil types. Uzb. biol. zhur. no.3:31-35 '59. (MIRA 12:11)

1. Institut genetiki i fiziologii rasteniy AN Uzbekskoy SSR.
(Cotton breeding)

L 58363-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) Pf-4 MJW/JD/HM
 ACCESSION NR: AR5013021 UR/0137/65/000/004/I056/I056
 669.15.018.85

SOURCE: Ref. zh. Metallurgiya, Abs. 41350

AUTHOR: Dabagyan, N. P.; Sagitov, G. A.; Barziy, V. K.; Dodoka, L. I.

TITLE: Structure and properties of a three-layered Kh18N9T + St3sp + Kh18N9T steel

CITED SOURCE: Sb. tr. Ukr. n.-i. in-t metallov, vyp. 10, 1964, 210-215

TOPIC TAGS: metal cladding, metal mechanical property, steel

TRANSLATION: The steel was prepared by casting stainless slabs into molds and subsequently rolling the three-layered ingots. The untrimmed sheet had a width of 1100 mm, overall thickness of 6.0-6.3 mm, and cladding thickness of 0.75-0.85. The chemical composition of the steel was as follows (in %): Kh18N9T--0.09 C, 1.14 Mn, 10.55 Ni, 17.68 Cr, and 0.50 Ti; St3sp--0.020 C, 0.52 Mn, 0.16 Si. The mechanical properties of cross sectional and longitudinal specimens were as follows, respectively: $\sigma_b = 56.6$ and 57.8 kg/mm^2 , $\sigma_s/\sigma_b = 0.755$ and 0.740 , $\zeta_k = 30.0$ and 39.0 kg/mm^2 and $\sigma_{10} = 27$ and 29.2% . The clad steel behaved like a homogeneous metal when cold

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bent until the sides touched. The optimum method of heat treatment of the steel is normalization from 900°C for 5 min which gives the clad layer satisfactory resistance to intergranular corrosion and the following high mechanical properties: $\sigma_s = 36.6-40.4 \text{ kg/mm}^2$, $\sigma_b = 54.2-56.4 \text{ kg/mm}^2$, $\sigma_s/\sigma_k = 0.680-0.720$, $\epsilon_k = 22.0-29.5 \text{ kg/mm}^2$, and $\sigma_{10} = 24.0-26.4\%$. The structure of the clad layers consists of austenite and uniformly distributed carbides of Cr; the structure of the base metal consists of grains of ferrite and perlite. At the layer boundaries there is a decarburized layer in the base metal which is about 0.1 mm thick. The microhardness of the base metal is 210 kg/mm², 161 kg/mm² for the decarburized layer, and 301-321 kg/mm² for the clad layer.

SUB CODE: MM

ENCL: 00

Card

2/2

07597-57 EWP(E)/ETI/EWP(k) LIP(C) JD/WW
ACC NR: AP6030438 SOURCE CODE: UR/0420/66/000/006/0095/0101

AUTHOR: Sagitov, G. A.

ORG: None

TITLE: Velocity field in the region of deformation during rolling without widening

SOURCE: Samoletostroyeniye i tekhnika vozdushnogo flota, no. 6, 1966, 95-101

TOPIC TAGS: flow velocity, metal deformation, metal rolling

ABSTRACT: The author considers metal flow in the region of deformation during stationary rolling without widening. The velocity field of the resultant two-dimensional flow is studied as a field generated by a number of perturbation sources (eddies) which cause motion of the continuous medium in the deformation zone. The trajectories of the particles in the deformation region are given by the complex potential

$$W = \Gamma \cdot \ln \frac{z-a}{z-\beta}$$

This function describes the flow created by a pair of eddies with poles located at the points α and β of the complex plane. The lines of flow in this case are arcs of a circle. However, since the velocity of a particle at any moment is directed along the tangent to the line of flow, any of these lines may be represented as a solid wall (roll). It is assumed that the velocity of following in the deformation region is due to eddies

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ACC NR: AP6030438

located at points α and β . The motion of the particles in the workpiece with respect to the rolls is due to a series of eddies located on the roll surfaces. The deformation region is conditionally divided into 8 sections with 16 pairs of eddies which generate a flow described by the given function. Since the complex potential of the perturbation sources is equal to the sum of their potentials, flow of the metal in the deformation region is described by the formula

$$W = W_1 + W_2 + \dots + W_{16} = \sum_{k=1}^{16} W_k,$$

where W_k is the potential of the k -th pair of eddies. The horizontal velocity of the flow due to a single pair of eddies with poles located at points α ($0; \alpha$) and β ($0; -\alpha$) is

$$v_x = \Gamma \cdot \left[\frac{\alpha + y}{(\alpha + y)^2 + x^2} + \frac{\alpha - y}{(\alpha - y)^2 + x^2} \right].$$

The total horizontal velocity at the point with coordinates x and y is given by

$$V_x = \sum_{k=1}^{16} v_{xk},$$

If the horizontal component of the velocity is known at a number of points in the deformation region, a system of equations may be set up for determining the intensity of the eddies. The vertical component of the overall velocity is given by the expression

$$V_y = \Gamma_1 \left[\frac{x - x_1}{(a_1 - y)^2 + (x - x_1)^2} + \frac{x - x_1}{(a_1 + y)^2 + (x - x_1)^2} \right] + \Gamma_2 \left[\frac{x - x_2}{(a_2 - y)^2 + (x - x_2)^2} + \frac{x - x_2}{(a_2 + y)^2 + (x - x_2)^2} \right] + \dots$$

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ACC NR: AP6030438

$$\dots + \Gamma_{10} \left[\frac{x - x_{10}}{(a_{10} - y)^2 + (x - x_{10})^2} + \frac{x - x_{10}}{(a_{10} + y)^2 + (x - x_{10})^2} \right] = \sum_{k=1}^{10} v_{jk}.$$

A more accurate description of the velocity field would require substitution of an infinite series of eddy sources for the finite series of eddies used in this approximation. Orig. art. has: 5 figures, 1 table, 5 formulas.

SUB CODE: 11³ SUBM DATE: none/ ORIG REF: 005

Card

3/3 *eqt*

L 17684-65 EWT(1) IJP(c)/ESD(dp)

ACCESSION NR: AP4049399

S/0361/64/000/002/0077/0086

AUTHOR: Sagitov, M. N. B

TITLE: Motion of rotating sphere of variable mass with vertical axis of rotation

SOURCE: AN KazSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 2, 1964, 77-86

TOPIC TAGS: motion mechanics, translational rotational motion, variable mass body

ABSTRACT: The motion of a rotating sphere of variable mass in a medium possessing resistance is studied. The sphere has an initial translational velocity in a direction perpendicular to the angular-velocity vector, so that it is acted upon by a Magnus force. The resistance force is proportional to the first power of the translational velocity. Other dynamic forces acting on the sphere are

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ACCESSION NR: AP4049399

neglected. The author derives the differential equations of motion of the center of inertia of this sphere, and solves the equation for both linear and bilinear variation of the mass. "In conclusion, I thank docent V. A. Sapa for suggesting the problem and guidance in its solution." Orig. art. has: 1 figure and 56 formulas.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: ME

NR REF SOV: 004

OTHER: 000

Card 2/2

L 40084-66 EWT(d)/EWT(1)/EWT(L)/EWP(w)/EWP(v)/EWP(k) IJP(c) EM/NW/GD
 ACC NR: AT6019249 SOURCE CODE: UR/0000/65/000/000/0214/0216

AUTHOR: Sagitov, M. N. 34
 211

ORG: none

TITLE: The ^Smotion of a rotating ²⁶sphere of variable mass when the angular velocity of rotation is changed

SOURCE: Kazakhstanskaya mezhvuzovskaya nauchnaya konferentsiya po matematike i mekhanike. 1st, Alma-Ata, 1963. Trudy, Izd-vo Nauka KazSSR, 1965, 214-216

TOPIC TAGS: spheric shell, ordinary differential equation, approximate solution

ABSTRACT: A shell of variable mass rotates around its own axis in a resistant medium, the forces of which are three: reactive, weight, and aerodynamic (Magnus effects). It is assumed that the center of inertia does not shift; that the change in mass proceeds from the center along the surfaces of the sphere, so that the outer radius remains constant; that the relative velocity of ejected particles, creating the reactive moment, remains constant. The resulting vector differential equation is solved by the method of variation of constants. Orig. art. has: 14 formulas, 1 figure.

SUB CODE: 12,13/ SUBM DATE: 18Nov65

Card 1/1 *llr*

SAGITOV, M.S.

Liapunov stability in one critical case. Vop. vych. mat. i tekhn.
no. 4:166-169 '64. (MIRA 18:12)

SAGITOV, M.S.; FILATOV, A.N.

System of first integrals in the problem of the motion of a solid around a fixed point in a central Newtonian force field. Izv. AN Uz. SSR. Ser. tekhn. nauk 7 no.4:31-36 '63.

(MIRA 16:11)

1. Institut mekhaniki AN UzSSR.

L 29447-66 EWT(1)/EWP(m)/EWP(c) IJP(c) GW

ACC NR: AR5020399

SOURCE CODE: UR/0124/65/000/008/A012/A012

AUTHOR: Sagitov, M. S.

TITLE: Stability of stationary rotation in some cases of solids rotating around an immovable point

SOURCE: Ref. zh. Mekhanika, Abs. 8A100

REF SOURCE: Sb. Vopr. vychisl. matem. i tekhn. Vyp. 3. Tashkent, 1964, 49-56

TOPIC TAGS: rotation, motion mechanics

ABSTRACT: A study was made of four problems on the stability of a vertical rotation by a symmetrical solid body around an immovable point. In the first 3 cases different types of outside forces were applied (the forces were proportional either to the distance from the horizontal plane, or the distance to the vertical) using the Chetayev method of integral-binding. Sufficiently stable conditions of the Mayevskiy type were obtained. The fourth problem was trivial. L. M. Markhashev.

SUB CODE: 20 / SUBM DATE: none

Card 1/1

42409-65 EWT(d) Pg-4 IJP(c)
ACCESSION NR: AP5006267

S/0040/65/029/001/0173/0175

AUTHOR: Sagitov, M. S. (Tashkent); Filatov, A. N. (Tashkent)

TITLE: Concerning Lyapunov stability in the critical case where the determinant possesses an even number of zero roots

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 1, 1965, 173-175

TOPIC TAGS: Lyapunov stability, applied mathematics, ordinary differential equations

ABSTRACT: The authors consider the following system of ordinary differential equations

$$\frac{dx_s}{dt} = p_{s1}x_1 + \dots + p_{s, n+2m}x_{n+2m} + X_s(x_1, x_2, \dots, x_{n+2m}) \quad \left(\begin{matrix} s = 1, \dots, n+2m \\ 2m < n \end{matrix} \right) \quad (1.1)$$

under the assumption that the corresponding determinant equation

$$\begin{vmatrix} p_{11} - \lambda & p_{12} & \dots & p_{1, n+2m} \\ \dots & \dots & \dots & \dots \\ p_{n+2m, 1} & p_{n+2m, 2} & \dots & p_{n+2m, n+2m} - \lambda \end{vmatrix} = 0 \quad (1.2)$$

possesses an even number $2m$ ($m > 1$) of zero roots, to which correspond m groups of solutions to the following equations of the first approximation

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$$\frac{dx_s}{dt} = p_{s1}x_1 + \dots + p_{s, n+2m}x_{n+2m} \quad (s = 1, \dots, n+2m) \quad (1.3)$$

All the remaining (i.e. non-zero) roots of equation (1.2) are assumed to possess negative real roots; in addition,

$$\bar{X}_s (\bar{X}_s(0,0,\dots,0) \equiv 0)$$

are taken to be holomorphic functions of the quantities

$$x_1, x_2, \dots, x_{n+2m}$$

whose expansion in powers of these quantities begins with terms no lower than that of the second order. The problem posed is to determine those conditions that make the solution

$$x_1 = x_2 = \dots = x_{n+2m} = 0 \quad (1.4)$$

of equations (1.1) stable or nonstable in the sense of Lyapunov. The case where equation (1.2) possesses two zero roots ($m=1$) was investigated in detail by A. M. Lyapunov (Issledovaniye odnogo iz osobennykh sluchayev zadachi ob ustoychivosti dvizheniya. Izd. LGU, 1963) and G. V. Kamenkov (Ob ustoychivosti dvizheniya. Tr.

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L 42409-65
ACCESSION NR: AP5006267

Kazansk. aviats. in-ta, 1939, no. 9). The present authors, following the ideas of Lyapunov, consider the case where the determinant (1.2) possesses any even number of zero roots ($m > 1$), and find certain restrictions that must be imposed on the functions X_g in addition to those above. Orig. art. has: 17 formulas.

ASSOCIATION: none

SUBMITTED: 24Sep64

ENCL: 00

SUB CODE: MA, ME

NO REF SOV: 004

OTHER: 000

Card

3/3

GAGITOV, P. U.

"Analysis of Methods of Interpreting Gravitational Phenomena." 2nd
Phys-Math Sci, Moscow Order of Lenin State U imeni M. V. Lomonosov; State
Astronomical Inst imeni P. K. Shternberg, Moscow, 1955. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations
Defended at USSR Higher Educational Institutions (14)

24(6),16(2)

SOV/55-59-1-4/28

AUTHOR: Sagitov, M.U.

TITLE: Determination of the Depth of the Center of Mass of a Foreign Body According to Data of a Gravimetric Reconnaissance

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, Nr 1, pp 27-34 (USSR)

ABSTRACT: The usual formulas for the determination of the centers of mass of a foreign body (carbon, ore, etc.) in the ground use the anomaly of the vertical gradient of the force of gravity and other data which can not be measured immediately with the aid of gravimeters. Thus the author assumes that the anomaly of the force of gravity is known and proposes a partly analytical, partly graphical method with the aid of which the situation of the point of gravity of a foreign body can be determined. The author discusses the method for a two-dimensional case (horizontal cylinder). The method uses essentially the graphical integration methods of B.A. Andreyev [Ref 9]. The application of the method to a theoretical example shows that the determination of the point of gravity can be carried out on principle confidently with the proposed method.

Card 1/2 There are 4 figures, and 10 references, 8 of which are Soviet, and 2 American.

Determination of the Depth of the Center of Mass SOV/55-59-1-4/28
of a Foreign Body According to Data of a
Gravimetric Reconnaissance

ASSOCIATION: Kafedra nebesnoy mekhaniki i gravimetrii (Chair of Celestial
Mechanics and Gravimetry)

SUBMITTED: October 30th, 1958



Card 2/2

S/154/60/000/02/09/018
B012/B123

AUTHORS: Kuzivanov, V. A., Sagitov, M. U.

TITLE: On the Impossibility of Determining the Geoid Figure by
Means of Gravimetric and Geodetic Data Only ✓

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i
aerofotos"yemka, 1960, No. 2, pp. 89-93

TEXT: The authors discuss the opinion of A. K. Malovichko, according to whom the space between the physical earth surface and the geoid can always be regarded as being free of mass. The effect of these masses is substituted by some fictitious masses, situated below the geoid in such a way that the gravitational fields outside the physical earth surface suffer no distortion. Fig. 1 shows the scheme of Poincaré. The authors conclude that it is impossible not to speak of a field distortion outside the surface. In Fig. 2 an example is given, according to which an insignificant change of the gravitational field outside the physical earth surface leads to absolutely different results when analytically shifted downward. Therefrom follows that analytical shifting of the potential ✓

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On the Impossibility of Determining the
Geoid Figure by Means of Gravimetric and
Geodetic Data Only

S/154/60/000/02/09/018
B012/B123

into regions below the earth surface is usually unsatisfactory. The problem of determining the figure of the earth on the basis of geodetic data and data of the outer gravitational field only was solved by M. S. Molodenskiy. Finally, the authors mention the proposal of A. K. Malovichko to reduce the gravitational anomaly Δg , measured on the earth surface S, to an auxiliary plane σ (equation (1)). This formula is criticized and substituted by equation (2). Comparing equations (1) and (2) one sees that the first one is only an approximation of the second one. Consequently, it is applicable only in an undisturbed relief. In mountainous terrain one has to use equation (2). The theorem of Kosha-Kovalevskaya is mentioned. There are 2 figures and 8 references: 7 Soviet and 1 Japanese. ✓

ASSOCIATION: Institut fiziki Zemli AN SSSR (Institute of Physics of the Earth of the AS USSR), Kuzivanov, V. A.; Gosudarstvennyy astronomicheskii institut imeni Shtenberga (State Institute of Astronomy imeni Shtenberg), Sagitov, M. U.

SUBMITTED: May 19, 1959

Card 2/2

S/169/61/000/012/023/089
D228/D305

AUTHOR: Sagitov, M. U.

TITLE: Calculating the second vertical derivative
from a gravity anomaly and its use for deter-
mining anomalous masses

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961,
33, abstract 12A329 (V sb. Prikl. geofizika.
no. 27. M., 1960, 143-157)

TEXT: A method is given for calculating W_{zzz} from the
values of W_z , which possesses a number of merits in comparison
with other available techniques: considerable curtailment of
the volume of calculation operations and the convenience of
using square charts as compared with circular ones. If there
is a sufficiently dense grid of points, the calculation accuracy
is raised at the expense of the fact that the values of W_z

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Calculating the second...

S/169/61/000/012/023/089
D228/D305

measured directly at the point (no interpolation error is introduced) are adopted in the calculation. Graphs are presented for selecting the size of the pallet in relation to the errors in the original gravity anomalies, the parameters of the anomalous body, and the position of the point at which W_{zzz} is calculated in respect of the body. [Abstracter's note: Complete translation.] 7

Card 2/2

IVANENKO, D.D.; SAGITOV, M.U.

Hypothesis of the earth's expansion. Vest. Mosk. un. Ser. 3:
Fiz., astron. 16 no.6:83-87 N-D '61. (MIRA 14:12)

1. Kafedra nebesnoy mekhaniki i gravimetrii i Kafedra statisti-
cheskoy fiziki i mekhaniki Moskovskogo gosudarstvennogo univer-
siteta.

(Geodesy)

SAGITOV, M.U.

Calculating the horizontal gravitation component in the upper
semispace and using it in determining anomalous masses. Trudy
GAISH 30:209-218 '61. (MIRA 14:8)
(Gravity prospecting)

SAGITOV, M.U.

Vertical component of the attraction for some cupola-shaped bodies
having a simple geometrical configuration. Soob.GAISH no.119:32-61
'61. (MIRA 15:3)

(Gravitation)

S/169/62/000/007/051/149
D228/D307

AUTHOR: Sagitov, M. U.

TITLE: Calculating the gravity anomalies of three-dimensional bodies by mean of a pallet

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 27, abstract 7A178 (Sobshch. Gos. astron. in-ta im. P.K. Shternberga, no. 119, 1961, 26-31)

TEXT: It is described how a pallet is constructed for calculating the gravity effect of three-dimensional bodies, given in the form of a structure contour chart. The gravitating body is split into elementary bodies of equal effect by means of a cylindrical system of coordinates (r, φ, z) with its origin at the point where Δg should be calculated. Having given the elementary gravity effect ($\delta g = 0.02$ milligal), the excess density, and the coefficient $k = H_k / \Delta \xi$ (H_k is the mean depth of the anomalous masses, and $\Delta \xi$ is the distance between planes normal to the z -axis, etc.), the author

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Calculating the gravity ...

S/169/62/000/007/051/149
D228/D307

successively determines the radii of the pallet's annular zones. The values of δg are calculated for annular zones, limited by the radii computed when k has new values (from 5 to 15). The method of applying the pallet is described. / Abstracter's note: Complete translation. /

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S/169/62/000/011/009/077
D228/D307

AUTHORS: Sagitov, M.U. and Marchuk, G.D.

TITLE: Eötvös correction at the expense of currents in
marine gravity determinations

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1962, 36,
abstract 11A209 (Geofiz. byul., Mezhdunar. geofiz.
kom-t pri Prezidiume AN SSSR, no.11, 1962, 40-42)

TEXT: Eötvös corrections obtained from the current chart
are compared with corrections, calculated from currents determined
during a voyage. It is shown that current charts can be used to
introduce Eötvös corrections with a practically acceptable precision.

[Abstracter's note: Complete translation]

Card 1/1

S/035/62/000/012/056/064
A001/A101

AUTHORS: Sagitov, M. U., Marchuk, G. D.

TITLE: Eötvös correction for the effect of currents in marine gravity determinations.

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 12, 1962, 32, abstract 12G200 ("Geofiz. byul. Mezhdoved. geofiz. kom-t pri Prezidiume AN SSSR", 1962, no. 11, '40 - 42)

TEXT: To take into account Eötvös correction, it is necessary to know velocity and direction of a current, determination of which presents considerable difficulties. The authors propose, in case when determinations of currents from a ship is impossible, to use charts of currents. Eötvös corrections determined by both methods are compared. The authors hold the opinion that current charts are unreliable, to be unjustified. ✓

Yu. B.

[Abstracter's note: Complete translation]

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SAGITOV, M.U.

Chart for calculating W_{zzz} from two-dimensional bodies of given cross section. Prikl. geofiz. no.32:111-117 '62. (MIRA 15:7)
(Gravity prospecting)

SAGITOV, M.U.

Vertical accelerations of the first order and their
consideration in submarine measurements of gravity.
Soob. GAISH no.123:38-47 '62. (MIRA 17:2)

GRUSHINSKIY, N.P.; SAGITOV, M.U.

Gravity observations during a total solar exlipse.
Vest. Most. un. Ser.3: Fiz., astr. 17 no.5:46-53 S-0 '62. (MIRA 15:10)

1. Kafedra nebesnoy mekhaniki i gravimetrii Moskovskogo universiteta.
(Gravity) (Eclipses, Solar)

33428

S/033/62/039/001/012/013
E032/E514

3,2500 (1080,1041,1057)

AUTHORS: Grushinskiy, N.P. and Sagitov, M.U.

TITLE: Some considerations on the gravitational field of the moon

PERIODICAL: Astronomicheskii zhurnal, v.39, no.1, 1962, 151-157

TEXT: The gravitational field of the moon is discussed on the basis of the latest published information. Published values for the ratio of the mass of the earth to the mass of the moon and for the mean radius of the moon are used to show that the average gravitational acceleration at the surface of the moon is $162.69 \pm 0.20 \text{ cm sec}^{-2}$. In the second section the authors are concerned with the variation of the gravitational field of the moon both in space and in time. Assuming that the moon may be looked upon as a triaxial ellipsoid, it is shown that the normal distribution of the gravitational acceleration is given by

$$\gamma(\varphi, \lambda) = \frac{\gamma_a + \gamma_b}{2} \left[1 - 0.00037 \sin^2 \varphi + 0.00008 \cos^2 \varphi \cos 2\lambda \right], \quad (10)$$

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Some considerations on the .

S/033/62/039/001/012/013
E032/E514

where γ_a and γ_b are the accelerations at the ends of the semi-axes of the equator, and α , λ are the selenocentric latitude and longitude. This formula must be corrected for the gravitational field of the earth. It is shown that if it is assumed that the moon is a perfectly rigid body, then using the theory of A. A. Nefed'yev (Ref 14: Izv. Astron. observ. im. Engel'gardta KGU, No. 30, 1958), the correction lies between $\pm 1.9 \cdot 10^{-5} \gamma_{\text{moon}}$ and $\pm 1.9 \cdot 10^{-5} \gamma_{\text{moon}}$, depending on the position of the moon. However, the assumption that the moon is a perfectly rigid body is certainly not correct and, therefore, these results must be suitably modified. Next, the variation of the normal field with altitude is computed and it is shown that this is 186.8 mgl/km. The final section deals with the variation in the gravitational field due to libration and the anomalous internal structure of the moon. The correction due to the former effect is less than $5 \cdot 10^{-7} \gamma$. Acknowledgments are expressed to D. Ya. Martynov for supplying the data used in this work. There are 5 tables and 17 references: 6 Soviet-bloc and 11 non-Soviet-bloc.

Card 2/5

33428

Some considerations on the ...

S/055/62/039/001/012/015
EO52/E514

The four latest English-language references read as follows:

Ref.6: E. Rabe, Astron.J., 55, 4, 1950; Ref.7: E. Delano, Ibid,
55, 5, 1950; Ref.8: H. Jeffreys, Monthly, Notices Roy.Astron.Soc.,
102, 194, 1948; Ref.11: G. M. Clemance, Astron.J., 55, 6, 1948.

ASSOCIATION: Gos. astronomicheskii in-t im. P. K. Shternberga
(State Astronomical Institute imeni P. K. Shternberg)

SUBMITTED: October 21, 1961

X

Card 3/3

SAGITOV, M. U., kand. fiz.-matem. nauk

International Gravimetric Committee. Vest. AN SSSR 33 no.1:
80-81 Ja '63. (MIRA 16:1)

(Gravimetry Congresses)

ACC NR: AT6028022

SOURCE CODE: UR/0000/63/000/000/0105/0114

AUTHOR: Grushinskiy, N. P.; Sagitov, M. U.

ORG: none

TITLE: The role of sea currents in the studies of the external gravity field of the Earth

SOURCE: Moscow. Universitet. Astronomicheskoye institut. Geologicheskoye fakul'tet. Morskiye gravimetricheskoye issledovaniya; sbornik statey, no. 2, 1963, 105-114

TOPIC TAGS: gravity, current velocity, Estvos correction, gravity anomaly, earth oblateness, *OCEAN CURRENT, GRAVIMETRIC SURVEY*

ABSTRACT: Gravitational measurements carried out on vessels in deep seas contain errors which are caused by the unknown velocity of deep currents. The current velocity and its direction change seasonally. Tide currents also play a role in the determination of gravity. There are three ways to determine the current velocity and direction: by direct measurements, by comparison of currents in adjacent points, or by taking current velocities from charts containing averaged current velocities. Measurements of Soviet scientists stated that in the Pacific the current velocity at the depth of 750 m is one half of that at the surface. The Estvos correction for stream velocities in depth from 0.2 to 0.8 m/sec is from 3 to 12 milligalls. The means value of gravity anomalies caused by streams was found to be equal to 5 mgl.

Card 1/2

ACC NR: AT6028022

Zones with gravity anomalies of several mgal are distributed in oceans by latitude and stretch tens of thousands of km. Gravity anomalies were expanded into series of spherical functions, and the Estvos corrections may cause rough errors in the oblateness of the Earth. The authors expressed thanks to L. P. Pellinen for discussions and A. I. Shabanova and L. N. Kharmadzhev for their help. Orig. art. has: 7 figures, 5 tables, and 1 formula.

SUB CODE: 08/ SUBM DATE: 22Nov63/ ORIG RE:F 006/ OTH REF: 002

Card 2/2

SAGITOV, M.U.

Theory of the determination of gravity constant by means of
torsional vibrations of a beam with weights. Soob. GAISH no.135:
3-18 '64. (MIRA 17:8)

KUZIVANOV, V. A. (Moszkva); SZAGITOV, M. U. [Sagitov, M. U.] (Moszkva);
BITO, Janos [translator]

Development of the principles of Lorand Eotvos in the field
of gravimetry in the Soviet Union. Fiz szemle 14 no. 2: 58-
61 F '64.

SAGITOV, N.V., inzhener.

Using rapid drying mixtures in semioil-bonded sand in making steel
and cast-iron moldings. Stroi. i dor. mashinostr. 1 no. 12:27-28
D '56. (MIRA 10:1)

(Sand, Foundry)

SAGITOV, N.V., kandidat tekhnicheskikh nauk.

Causes of crack formation in the side walls of locomotive fireboxes.
Vest.TSNII MPS 15 no.2:30-34 S '56. (MIRA 9:12)
(Locomotives--Fireboxes)

SAGITOV, N.V., kand.tekhn.nauk; ROVIAKH, S.Ye., kand.tekhn.nauk

Using the TSAM 9-1,5 alloy and caprone as substitutes for bronze
in excavators. Stroi. i dor. mashinostr. 5 no.4:29-32 Ap '60.
(MIRA 13:9)

(Excavators) (Alloys) (Nylon)

NOVICHKIN, S.Ye., kand.tekhn.nauk; S. GITOV, E.V., kand.tekhn.nauk,
Priruchnik uchastkiye STAN OUS, M.F., kand.tekhn.nauk.

Using the 9-1,5 TSAM alloy instead of bronze in repairing excavators.
Mekh. stroi. 18 no. 1:23-24 Ja '61. (MIRA 14:2)

1. Proekt c-konstruktorskoye byuro 11 transstroya.
(Excavating machinery—Maintenance and repair)

SAGITOV, N.V., kand. tekhn. nauk

Bearings on a plastic base for work on abrasive media. Transp. stroi.
14 no.4:32-34 Ap '64. (MIRA 17:9)

15-8510

27578
S/190/61/003/009/013/016
B124/B101

AUTHORS: Maklakov, A. I., Pimenov, G. G., Sagitov, R. Ya.

TITLE: Investigation of polymers subjected to uniaxial stretch at high deformation rates

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 9, 1961, 1410
- 1414

TEXT: The phenomenon of "hairline cracking" and the resulting structural changes are the topic of this publication. An amorphous, transparent film made of Lavsan (polyethylene terephthalate), 0.15 to 0.40 mm thick, was investigated. To prepare crystalline samples, the amorphous film was heated to 120°C for 2 hr, which causes the film to become opaque. Tensile tests were performed with an PM-60 (RMI-60) machine at stretching rates of 100, 200, 500, and 1000 mm/min and constant temperature (0 - 100°C). The X-ray pictures were taken with a YPC-55 (URS-55) apparatus (copper anode and nickel filter); the anode voltage was 35 kv, the amperage 20 ma. The structure of hairline cracks was studied using an MBM-6 (MBI-6) microscope. The density of the samples was determined by the flotation

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S/190/61/003/009/013/016

B124/B101

Investigation of polymers...

technique. The formation of hairline cracks was found to occur in amorphous and crystalline polyethylene terephthalate, low-density polyethylene, polypropylene, caprone, and enant, which, except for the first, were all crystalline before deformation, which shows that hairline cracking is possible under conditions of high-rate cold drawing. Fig. 1 shows that stress curves are the same with formation of a transparent bottleneck and of hairline cracks. The stress which causes the formation of hairline cracks is, however, smaller than the one which yields a transparent substance. The structure of hairline cracks in amorphous and crystalline Lavsan is somewhat different. The opacity of samples decreases with increasing temperature at constant stretching rate. The sample remains completely transparent when deformed at a definite temperature. The higher the deformation rate, the higher are the initial temperatures of stretching without formation of hairline cracks, and vice versa. The formation of hairline cracks occurs below the vitrification point and in the center of the Lavsan sample with only a thin top layer remaining transparent. The density of samples of oriented Lavsan with cracks (about 0.82 - 1.13 g/cm³) strongly differs from that of the same samples showing no hairline cracks (about 1.32 g/cm³) and drops with rising temperature and

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21578
S/190/61/003/009/013/016
B124/B101

Investigation of polymers...

drawing rate. The orientation of the amorphous Lavsan film with hairline cracking leads to the phase transition of the oriented film. This was confirmed by the appearance of new symmetry elements in the X-ray pictures. When the samples showing hairline cracks are heated to 200°C for 5 hr, the bending strength in the direction of drawing, but not perpendicular to this direction, is considerably reduced. The number of hairline cracks is somewhat reduced by storage in a mixture of phenol and tricresol at 20°C; pressures of 150 atm lead to an increase in transparency with density increasing from 1.01 to 1.36. The formation of a bottleneck with hairline cracks in forced elastic deformation of amorphous polyethylene terephthalate at room temperature is accompanied by a phase transition, while only the degree of orientation increases when hairline cracks form in high-rate uniaxial deformation of crystalline low-pressure polyethylene, polypropylene, enant, and caprone. When the stretching rate of Lavsan is reduced below about 200 mm/min, no further hairline cracking is found at room temperature. The dependence of hairline cracking on the regular structure of the molecule in a polymer is proved by the fact that no hairline cracks form in high-pressure polyethylene. V. A. Kargin and G. L. Slonimskiy (Ref. 5: Kratkiye ocherki po fiziko-khimii polimerov

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S/190/61/003/009/013/016

B124/B101

Investigation of polymers...

(Short treatise on physical chemistry of polymers), izd. MGU, 1960, p. 130) are mentioned. There are 3 figures, 1 table, and 8 references: 7 Soviet and 1 non-Soviet.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan' State University imeni V. I. Ul'yanov-Lenin)

SUBMITTED: October 14, 1960

Card 4/5

I. 01047-67 EWT(m)/EWP(j)/T IJP(e) RM SOURCE CODE: UR/0190/66/008/006/1003/1006
ACC NR: AP6019537

AUTHOR: Sagitov, R. Ya.; Maklakov, A. I.

ORG: Kazan University im. V. I. Ul'yanov-Lenin (Kazanskiy universitet)

TITLE: NMR study of crystallization of certain polymers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 6, 1966, 1003-1006

TOPIC TAGS: NMR spectrum, crystalline polymer, polymer structure, *POLYETHYLENE TEREPHTHALATE*

ABSTRACT: Applicability of the NMR technique to the investigation of the crystallization process was examined using polyethyleneterephthalate and several polyamides as model compounds. The secondary momentum of the absorption line, ΔH_2^2 , was measured during 20 min to 4 hr crystallization at 20°-190°C. NMR spectra of amorphous and crystalline samples of polymers are graphed. The NMR spectra, as derivatives of the proton absorption indicate, corresponded to 17 megacycles at 20°-190°C. Because of the dependence of the NMR spectrum upon crystallinity, it is concluded that the NMR technique can be utilized in studying the crystallization process. Orig. art. has: 4 figures.

SUB CODE: - 07/

SUBM DATE: 27May65/

ORIG REF: 006/

OTH REF: 002

UDC: 678.01:53

awm

Card 1/1

SAGITOV, S.I.

Plant introduction in the territory of the Kara-Kalpak A.S.S.R. Uzb,
biol.zhur. no.6:17-19 '61. (MIRA 15:2)

1. Botanicheskiy sad Karakalpakskogo filiala AN UzSSR.
(Kara-Kalpak A.S.S.R.--Plant introduction)

SAGITOV, S.I.

Biology of the willow *Salix songorica* Anders. Uzb. biol.
zhur. 6 no.3:27-29 '62. (MIRA 15:6)

1. Karakalpakskiy filial AN UzSSR.
(AMU DARYA VALLEY--WILLOWS)

L 01930-67 EWT(m)/EWP(j) RM

ACC NR: AR6031863 SOURCE CODE: UR/0058/66/000/006/D036/D036

AUTHOR: Sagitova, E. V.; Atakhodzhayev, A. K.

TITLE: Effect of the concentration of a solution on the width of Raman lines of acetonitrile ^

SOURCE: Ref. zh. Fizika, Abs. 6D285

REF SOURCE: Sb. Optich. issled. molekulyarn. dvizheniya i mezhmolekulyarn. vzaimodeystv. v zhidkostyakh i rastvorakh. Tashkent, Nauka, 1965, 50-54

TOPIC TAGS: Raman spectrum, spectral line, acetonitrile spectral line, acetonitrile .

ABSTRACT: Measurements were made of the true widths of Raman lines of liquid acetonitrile (A) and its solution in water, carbon tetrachloride, ethyl ether, methanol, and ethanol for 33.50 and 67 mol. % concentrations. Changes in concentration were found to have little effect on the width of the lines. A change in width $\Delta \nu = 380 \text{ cm}^{-1}$ A in H_2O reflected a change in the rotational mobility of the

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L 01930-67

ACC NR: AR6031863

0

molecules in solution. The conclusion is drawn that a change in the surrounding medium of the molecules has virtually no effect on the width of the lines.

E. Broun. [Translation of abstract]

[SP]

SUB CODE: 20/

Card 2/2

hs

SAGITOVA, M. G., Cand Agr Sci -- (diss) "Certain ^{problems in the} agricultural ^{under} engineering ~~problems~~ of ~~the~~ ^{the} onion ~~in~~ conditions of Alma-
Ata suburban zone." Alma-Ata, 1956. 16 pp. (Min Agr USSR,
Kazakh Agr Inst), 100 copies. (KL, 9-58, 121)

ARBUZOV, B. A.; ZOROASTROVA, V. M.; SAGITOVA, R. Kh.

Esters of phosphoric and phosphorothioic acids containing heterocyclic radicals. Report No. 6: Interaction of phosphoryl and thiophosphoryl chlorides with benzimidazole and morpholine. Izv AN SSSR Ser Khim no. 4:661-669 Ap '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A. M. Butlerova Kazanskogo gosudarstvennogo universiteta.

CHERNOVA, I.V.; KOZLOVA, A.A.; SAGITOVA, R.G.; SHELOMENTSOVA, N.I.

Epidemiologic effectiveness of enteroparenteral vaccination against
dysentery. Zhur. mikrobiol. epid. i immun. no.11:58-60 N '54.
(MLRA 8:1)

1. Iz Ufinskogo instituta vaktsin i syvorotok (dir. U.S.Yenikeyeva,
nauchnyy rukovoditel' prof. N.I Mel'nikov)
(DYSENTERY, BACILLARY, prevention and control,
vacc., enteroparenteral technic)

SAGITOVA, R.G.

FUKS, I.M.; ~~SAGITOVA, R.G.~~; AL'GREN, V.M.

Effectiveness of vaccination against diphtheria. Zhur.mikrobiol.
epid. i immun. no.9:24-25 S '55. (MLRA 8:11)

1. Iz Ufimskogo instituta vaktsin i syvorotok imeni Mechnikova
(dir. U.S. Yenikeeva, nauchnyy rukovoditel'---prof. N.I.Mel'nikov)
(DIPHTHERIA, prevention and control,
vacc., results)
(VACCINES AND VACCINATION,
diphtheria, results)

KORONELLI, T.V.; MEL'NIKOVA, S.G.; SAGITULLIN, R.G.

Effect of some additives on the metabolism of *Claviceps purpurea*
culture (strain PRL-1980). Vest. Mosk. un. Ser. 6: Biol., pochv.,
20 no.6:23-28 N-D '65. (MIRA 19:1)

1. Kafedra biologii pochv i Kafedra organicheskoy khimii Moskovskogo
gosudarstvennogo universiteta.

AUTHORS: Kost, A. N., Sagitullin, R. S. 79-12-31/43

TITLE: Reactions of the Hydrazine Derivates
(Reaktsii proizvodnykh gidrazina).
XVI. On the Effect of Benzylchloride on Acylhydrazone
(O deystvii khloristogo benzila na atsilgidrazony).

PERIODICAL: Zhurnal Obshchey Khimii 1957, Vol. 27, Nr 12, pp. 3338-3342
(USSR)

ABSTRACT: In a previous paper the synthesis of the benzylhydrazine by means of a reaction of the acetylhydrazone of acetone within sodium enolate with an ensuing action of benzylchloride and of a hydrolysis was described. The synthesis was further developed. Without the hydrolysis an intermediate product is obtained, the acetylbenzylhydrazone, which hydrolysed easily and formed benzylhydrazine. If a mixture of hydrazone and triethylamine (or pyridine) is assumed at the benzylisation instead of sodium enolate, then no benzylisation takes place in the absence of water. A presence of water leads to a weak reaction and to a compound with a melting point of 108° C. For the purpose of establishing the structure of this compound the acetylhydrazone of the cyclohexanone and the benzoylhydrazone of acetone was benzylised. In the first instance a substance

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Reactions of the Hydrazine Derivates.

79-12-31/43

XVI. On the Effect of Benzylchloride on Acylhydrazone.

with a melting point of 108° C, was obtained, analogous to the second instance a compound with a melting point of 165° C. On an action of benzylchloride on acetylhydrazine a product with the same melting point of 108° C was obtained, which transforms into a hydrochloric unsymmetrical dibenzylhydrazine at an acidous hydrolysis. This result finally clarifies the structure of the synthesised compounds. The compound melting at 108° C is a acetyl derivate of the unsymmetrical dibenzylhydrazine, where as the compound melting at 165° C is a benzoyl derivate of the latter. From this it appears, that the reaction of benzylchloride with acetylhydrazone may be used as a preparative method for the synthesis of unsymmetrical dibenzylhydrazine. There are 14 references, 2 of which are Slavic.

ASSOCIATION: Moscow State University; Moscow Polygraphic Institute
(Moskovskiy gosudarstvennyy universitet i Moskovskiy poligraficheskiy institut).

SUBMITTED: November 22, 1956

1. Hydrazine derivatives-Quantitative analysis
2. Benzyl chlorides-Chemical reactions
3. Acylhydrazone-Chemical reactions

Card 2/2

S/079/60/030/007/012/020
B001/B067

AUTHORS: Kost, A. N., Suminov, S. I., Sagitullin, R. S.,
Yershov, V. V.

TITLE: Reactions of Hydrazine Derivatives. XXIX. Cyanoethylation
of Pyrazolones ✓

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7,
pp. 2286 - 2291 ✓

TEXT: The cyanoethylation of the pyrazolones has hitherto not been described; there are even indications (Ref. 1) that 1-phenyl-3-methyl pyrazolone does not react with acrylic nitrile. The present experiments however, show that pyrazolones readily add acrylic nitrile in the presence of alkali lyes. To render the determination of the structure easier (addition to the hydroxyl group or methylene group in position 4) pyrazolones were synthesized with a β -cyanoethyl group in position 1 or 4. For synthesizing 1-(β -cyanoethyl)-pyrazolones-5 the reaction of β -hydrazine propionitrile was made with esters of β -ketonic acids. A German and an American patent indicate that 3-methyl-1-(β -cyanoethyl)-pyrazolone-5

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Reactions of Hydrazine Derivatives.XXIX.
Cyanoethylation of Pyrazolones

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B001/B067

and 3-phenyl-1-(β -cyanoethyl)-pyrazolone-5 may be obtained by this method (Refs. 2,3). According to the data of the present paper the reaction of β -hydrazine propionitrile with the esters of various β -ketonic acids in alcohol, under short boiling, leads to the corresponding 1-(β -cyanoethyl)-3,4-dialkyl-pyrazolones-5 (65-95% yield) (Scheme 1). The synthesis of pyrazolones with the β -cyanoethyl group in position 4 was based on monocyanoethylated acetoacetic ester and the corresponding hydrazines (Scheme 2). According to data by W. Krohs (Ref. 4) 3-methyl-pyrazolone-5 was reacted with β -chloro propionitrile in alkaline medium under conditions which permit a full enolization of pyrazolone (an equivalent amount of sodium in tertiary butyl alcohol) with the formation of two products (X) and (XI) which were separated by fractional crystallization. These compounds had the same empirical formula which corresponds to the monocyanoethylated product. With iron chloride they did not produce the violet color characteristic of the enol form. They differed, however, by their melting points and the solubility in water. A test melting of a mixture of the two products showed no temperature depression. Compounds (X) and (XI) show the same infrared spectra whose lines are characteristic of $C\equiv N$ and $C=N$ (in the ring) whereas the lines of the

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Reactions of Hydrazine Derivatives.XXIX.
Cyanoethylation of Pyrazolones

S/079/60/030/007/012/020
B001/B067

carbonyl group are lacking. On the basis of these and further studies the structure of the β -cyanoethyl ethers of 3-methyl-5-oxypyrazole could be ascribed to compounds (X) and (XI), and their difference could be explained by the presence of crystalline modifications (Scheme 3). There are 7 references: 2 Soviet, 2 US, and 3 German. ✓

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 15, 1959

Card 3/3

S/079/60/030/010/017/030
B001/B066

AUTHORS: Kost, A. N., Sagitullin, R. S., Sun' Yuy-shan'

TITLE: Reactions of Hydrazine Derivatives. XXXI. Some β -Aryl-ethyl Hydrazines and Corresponding Pyrazolones

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 10, pp. 3280 - 3287

TEXT: In recent times, much attention has been paid to the synthesis of aralkyl hydrazines in which the hydrazine group is in the β -position of the side chain. β -phenyl isopropyl hydrazine, for example, reduces blood pressure (Ref.1). β -phenyl ethyl hydrazine (I) was synthesized in a yield of 41% according to Scheme 1:

$$\text{C}_6\text{H}_5\text{CH}_2\text{Cl} \xrightarrow{\text{N}_2\text{H}_4} \text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{NHNH}_2 + (\text{C}_6\text{H}_5\text{CH}_2)_2\text{NNH}_2 \text{ (I)}$$
by direct alkylation of the hydrazine (Ref.2). The authors of the present paper improved this synthesis by using their own method applied to benzyl hydrazine in Ref.3. Reaction took place in an 83% yield, without a solvent and by heating

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Reactions of Hydrazine Derivatives. XXXI. Some β -Aryl-ethyl Hydrazines and Corresponding Pyrazolones S/079/60/030/010/017/030
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the hydrazine hydrate up to 90°C. As the methoxy derivatives of β -phenyl ethyl hydrazine are closely related to the alkaloids of the mescaline type, a mixture of two isomers of veratryl lithium was obtained by the method of Ref.8 (synthesis of β -(2,5-dimethoxy phenyl)-ethyl alcohol), by the reaction of butyl lithium with veratrole. With ethylene oxide, these two isomers form a mixture of the corresponding alcohols (Scheme 2). These alcohols were separated by vacuum fractionation, and β -(2,3-dimethoxy phenyl)-ethyl alcohol (47%) and β -(3,4-dimethoxy phenyl)-ethyl alcohol (17%) were obtained. By the reaction with thionyl chloride, these alcohols were converted into the corresponding chlorides (IV) and (V) (81-82% yield) which, in turn, gave two new monosubstituted dimethoxy phenyl-ethyl hydrazines (VI and VII) by direct alkylation of the hydrazine. These compounds turn yellow on exposure to air and separate nitrogen. The resultant β -aryl-ethyl hydrazines were condensed with ketonic acid esters to obtain 1'-aryl-ethyl pyrazolones-5. The condensation was carried out without any solvent (or in a small quantity of alcohol). After a short heating, the reaction mixture was diluted with a large quantity of ether, and a sufficiently pure crystalline

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Reactions of Hydrazine Derivatives. XXXI. Some β -Aryl-ethyl Hydrazines and Corresponding Pyrazolones S/079/60/030/010/017/030
B001/B066

pyrazolone was immediately separated out. When treating these pyrazolones with phosphorus oxychloride, no ring formation according to the reaction of Bishler-Napiral'skiy was found to occur, but a conversion of the pyrazolone to chloro-pyrazole. There are 10 references: 1 Soviet, 2 US, 4 German, 1 British, and 2 Czechoslovakian.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: December 10, 1959

Card 3/3

KOST, A.N., SAGITULLIN, R.S.

Reactions of hydrazine derivatives. Part 22: 1-Benzylpyrazolone.
Vest.Mosk.un.Ser.mat., mekh., astron., fiz., khim. 14 no.1:
225-228 '59. (MIRA 13:8)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.
(Pyrazolinone)

SAGITULLIN, R.S.; KOST, A.N.

Reactions of hydrazine derivatives. Part 25: Action of
acetaldehyde and polyphosphoric acid on acylhydrazones. Vest.
Mosk.un.Ser.mat., mekh, astron. fiz, khim. 14 no.4:187-193 '59.
(MIRA 13:8)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.
(Acetaldehyde)
(Phosphoric acid)
(Hydrazones)

AVDEYEVA, Ye.V.; ZHUZHNIKOV, D.P.; ZOLOTAREV, Ye.Kh.; SAGITULLIN, R.S.

Insecticidal properties of some pyrazolyl carbamates. Vest. Mosk.
un. Ser. 6: Biol., pochv. 16 no.6:19-25 N-D '61. (MIRA 15:1)

1. Kompleksnaya laboratoriya po izucheniyu sredstv i sposobov bor'by
s vrednymi zhivotnymi i boleznyami rasteniy Moskovskogo universiteta.
(Insecticides) (Carbamic acid)

KOST, A.N.; SAGITULLIN, R.S.; SUN' YUY-SHAN' [Sun Yü-shan]

Reactions of hydrazine derivatives. Part 31: Some β -arylethylhydrazines and corresponding pyrazolones. Zhur.ob.khim. 30 no.10:3280-3287 0 '61. (MIRA 14:4)

1. Moskovskiy gosudarstvennyy universitet.
(Hydrazine) (Pyrazolinone)

KUDRIN, A.N.; KOROZA, G.S.; KOST, A.N.; SAGITULLIN, R.S.

Vetrazin as a uterine stimulant. Farm. i toks. 26 no.1:75-80
Ja-F '63. (MIRA 17:7)

1. Kafedra farmakologii (zav. - prof. A.N. Kudrin) farmatsevticheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova i laboratoriya spetsial'nogo organicheskogo sinteza (zav. - chlen-korrespondent AN SSSR prof. A.F. Terent'yev) Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

S/079/63/033/001/014/023
D205/D307

AUTHORS: Kost, A. N. and Sagitullin, R. S.

TITLE: Reactions of hydrazine derivatives. XXXIV. The conversions of benzylhydrazones on heating with acidic reagents

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 1, 1963, 237-244

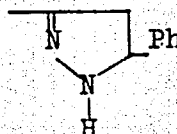
TEXT: On heating the benzylhydrazone of acetone (I) with ZnCl_2 to 200°C , the products obtained were NH_3 , toluene, 1,2-diphenylethane (DPE), and a mixture of N-containing compounds including 3,5,5-trimethylpyrazoline (II) and 3-methyl-5-phenyl-pyrazole (III). With dry HCl at 200°C , I gave toluene, DPE, iso- BuC_6H_5 , iso-propylhydrazone of acetone (IV), II, 1-benzyl-3,5,5-trimethylpyrazoline (V), and 1-benzyl-3-phenyl-5-methylpyrazole (VI). At 250°C , benzylamine is formed from I and ZnCl_2 , and a mixture of I, HCl , and glacial

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D205/D307

Reactions of hydrazine ...

acetic acid gives rise to V, 1-acetyl-2-benzylhydrazine (VII) and some II, but little hydrocarbons. It is suggested that on heating in the presence of H^+ , I undergoes an aldol-like condensation leading to V; the benzylhydrazine liberated is acetylated by HOAc to VII or decomposes to benzylamine. II may result from the thermal debenzilation of V. In the absence of an acetylating agent, or at high temperatures, the double bond in I is shifted to give VII and iso-propylhydrazone of benzaldehyde (VIII). VII may also lose N_2 to give a mixture of hydrocarbons. I and VII may interact to give IV. Dehydrogenation of VIII leads to the azine $(CH_3)_2C=N-N=CHPh$ (IX) which, in the presence of H^+ should cyclize to CH_3



(X). This pyrazoline is converted to 3-methyl-5-phenylpyrazole (XI)

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Reactions of hydrazine ...

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by loss of 2 H-atoms and XI may be benzylated to a mixture of pyrazole derivatives.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: December 21, 1961

Card 3/3

KOST, A.N.; SAGITULLIN. R.S.

Reactions of hydrazine derivatives. Part 37: Synthesis of
alkyl hydrazines and pyrazole esters of dimethylcarbamic
acid. Zhur.ob.khim. 33 no.3:867-874 Mr '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet imeni
M.V. Lomonosova.

(Hydrazine)

(Pyrazole)

(Carbamic acid)

KOST, A.N.; SAGITULLIN, R.S.; YUROVSKAYA, M.A.

Alkaloids and alkaloid-like structures. Part 2: Synthesis of
some N-aminobenzylamines. Zhur.ob.khim. 33 no.6:2011-2015 Je
'63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Toluenediamine)

KOST, A.N.; KORONELLI, T.V.; SAGITULLIN, R.S.

Chromatography of indole derivatives in a thin layer of
aluminum oxide and on paper. Zhur. anal. khim. 19 no. 1:
125-130 '64. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SAGITULIN, R.S.; KORCHENKO, T.V.

Synthesis of dl-abrine and 5-methoxyabrine. Vest. Mosk. un. Ser.
2 Khim. 19 no.2:68-71 Mr-Apr'64 (MIRA 17:6)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.

(A)
 I 00042-66 EWA(j)/EWA(b)-2/EWT(1)/EWT(m) RM/EW/RO
 UR/0075/65/020/008/0845/0849
 543.80
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 B
 ACCESSION NR: AP5023714
 AUTHOR: Kost, A. N.; Koronelli, T. V.; Lideman, R. R.; Sagitullin, R. S.
 TITLE: Fluorescence method for separate determination of ergoalkaloids and tryptophan
 SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 8, 1965, 845-849
 TOPIC TAGS: fluorescence spectrum, alkaloid, tryptophan, spectrophotometric analysis
 ABSTRACT: The ability of ergoalkaloids and tryptophan to fluoresce in ultraviolet light was utilized in a method for their separation and determination, as these compounds were found to have widely separated peaks in their absorption and fluorescence spectra. 5-Methoxy-N-methyltryptophan and 5-methoxy-2-indolecarboxylic acid present together in approximately equal amounts (with respective peaks at 338 and 420 mμ) were thus separated. Ergoalkaloids could not be determined in the presence of dihydroergotoxin, whose spectra are too similar to theirs. Although the spectra of ergonovine and lysergic acid are also quite similar, these two compounds
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ACCESSION NR: AP5023714

can be determined when present together if different wavelengths are employed. Mix-
tures of lysergic acid and tryptophan lend themselves particularly well to the
fluorescence analysis, even when one or the other is present in considerable excess.
The proposed method was then successfully applied to the analysis of alkaloidlike
metabolic products of the mold Cl. purpurea strain PRL-1980. Orig. art. has: 8
figures and 3 tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow
State University); Institut psikhiatrii AMN SSSR (Institute of Psychiatry, AMN
SSSR)

SUBMITTED: 08Jul64

ENCL: 00

SUB CODE: GC, OP

NO REF SOV: 004

OTHER: 009

Card 2/2

KIKNADZE, D.A.; IZASHVILI, R.P.; MANEVICH, A.M.; SAGIYEV, S.S.; OISIN, P.G.;
Prinimali uchastiye: MALOVITSKIY, V.S.; SOBOLEV, Yu.B.; VASIL'YEV, M.G.;
TIMOSHENKO, S.I.

Automatic line for the painting of children's carriages with the jet
spraying method; experience in the introduction and use. Lakokras.
mat. 1 ikh prim. no. 3:69-75 '63. (MIRA 16:9)
(Spray painting—Equipment and supplies)

KHODALEVICH, A.N.; BREYVEL', M.G.; SAGLO, V.V.; SMIRNOV, G.A.; BAKIROV, A.A.;

Problems of recent tectonics; concerning the results of the 4th Plenary Session of the Geomorphological Commission. Sov. geol. 8 no.5:140-146
My '65. (MIRA 18:7)

1. Ural'skoye geologicheskoye upravleniye, Sverdlovsk (for Khodalevich, Breyvel', Saglo, Smirnov).

TOCKSTEIN, A.; PECKA, R.; BALCAR, B.; SAGNER, P.

On the oxidation of 1-p-tolylaminonaphthalene-8-sulfonic acid. Pts 1-2. Coll Cz Chem 28 no.11:3030-3056 N°63.

1. Institut für physikalische Chemie, Technische Hochschule für Chemie, Pardubice.

CZECHOSLOVAKIA/Analytical Chemistry. Analysis of Organic Substances.

E-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43103.

Author : Matrka Miroslav, Sagner Zdenek.

Inst ;

Title : Reductometric Determination of Pyrazolanthrone with the Sulfate of Divalent Vanadium.

Orig Pub: Chem. prumysl, 1957, 7, No 9, 484-485.

Abstract: Description of potentiometric titration of pyrazolanthrone (I) with a solution of $VS0_4$ (II). 0.2 g of the sample are dissolved in about 80 ml alcohol, the solution is diluted with water to 150 ml, 25 ml of a saturated solution of Na-citrate are added, and potentiometric titration is carried out with 0.1 N solution of II at 20° using

Card : 1/2

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5
Construction of a buret for reductometric titrations.
Miroslav Matka, Bohuslav Smetana, and Zdeněk Šagner.
(Výzkumný ústav org. syntesy, Pardubice-Rybitví, Czech.).
Chem. průmysl 8, 307(1958). A buret assembly was constructed which minimizes the oxidation of sensitive reagents. A reservoir is filled with the reducing agent in an inert, O-free atm. The buret is connected by a side arm to a bulb contg. Zn. The exit of the bulb is drawn into a fine capillary and immersed in a vessel contg. HCl. During titrations H₂ is generated in the system until the pressure is equalized, thus maintaining a reducing atm. at all times.
Max Hellmann

9-9

MATRIKA, Miroslav; SAGNER, Zdenek; STERBA, Vojeslav; ARIENT, Josef

Decomposition mechanism of some basic triphenylmethane dyes in aqueous medium. Chem prum 11 no.11:574-577 N '61.

1. Vyzkumny ustav organickych syntez, Pardubice-Rybitvi.

MATRKA, M.; POSKOCIL, J.; SAGNER, Z.; STERBA, Z.

Oxydation of N,N,N',N'-tetraethyl-4,4'-diaminoazobenzene with cerium (IV)-sulfate. Coll Cz Chem 26 no.12:3177-3180 D '61.

1. Organisch-technologisches Laboratorium I, Forschungsinstitut für organische Synthesen, Pardubice-Rybitví.

MATRKA, Miroslav; SAGNER, Zdenek; NAVRATIL, Frantisek; STERBA, Vojeslav

Oxidation of N.N.N.' .N' - tetramethyl naphthidine to the dinaphthoquinone-(4,4')-bis-dimethyl immonium salt. Chem prum 12 no.4:178-182 Ap '62.

1. Vyzkumny ustav organickych syntez, Pardubice-Rybitvi.

MATRKA, M.; SAGNER, Z.

Formation of semiquinone in oxidation of N,N,N',N'-tetramethylbenzidine to diphenquinone-(4,4')-bis-dimethylmonium salt. Coll Cz Chem 27 no.7:1722-1726 J1 '62.

1. Forschungsinstitut für organische Synthesen, Pardubice - Rybitvi.

MATRKA, Miroslav; PODSTATÁ, Jiri; SAGNER, Zdenek

Influence of temperature on the course of nitrite titration
of aromatic primary amines. Chem. prum. 12 no.10:549-551
0 '62.

1. Vyzkumny ustav organickych syntez, Pardubice - Rybitvi.

MATRKA, Miroslav.; SAGNER, Zdenek

Reaction of the N.N.N"."-tetramethyl-4,4"-diamino-p-terphenyl
with nitrous acid. Chem prum 13 no.11:583-584 N°63.

1. Vyzkumny ustav organickych syntez, Pardubice - Rybitvi.

MATRKA, Miroslav; SAGNER, Zdenek; VONDRAK, Frantisek

Polarometric coupling titration of 4-nitrobenzene diazonium chloride. Chem prum 14 no.4:198-200 Ap '64.

1. Research Institute of Organic Syntheses, Pardubice - Rybitvi.

L 31477-66 EWP(j) RP/DM

ACC NR: AP6023169

SOURCE CODE: CZ/0008/65/000/011/1361/1364

AUTHOR: Sterba, Vojeslav; Sagner, Zdenek; Matrka, Miroslav

ORG: Laboratory of Organic Technology, Research Institute for Organic Syntheses,
Pardubice - Rybitvi (Organicko-technologicka laborator, Vyzkumny ustav organickych
synthes)

TITLE: Kinetics of diazotization of aniline and p-chloroaniline using electrometric
determination of nitrous acid in the reaction mixture

SOURCE: Chemicke listy, no. 11, 1965, 1361-1364

TOPIC TAGS: chemical kinetics, aniline, chemistry technique, organic azo compound

ABSTRACT: The study was conducted in a medium of 0.1 N HCl at 0°, 10°, and 20°C. The progress of the reaction was continuously followed by means of an electrometric method proposed by the authors. The influence of the concentration of HCl upon the velocity constant of the reaction was investigated. The rate decreases with increasing acid concentration. The electrodes used in the electrometric method are poisoned after some time by the action of nitrous acid and that of nitrosylchloride. Orig. art. has: 7 figures and 3 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 11Nov64 / ORIG REF: 005 / OTH REF: 001

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CZECHOSLOVAKIA

MATEKA, M.; MARHOLD, J.; SAGNER, Z.; STERBA, V.

Laboratory of Organic Technology and Toxicology,
Research Institute of Organic Syntheses, Pardubice-
Rybitvi - (for all).

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 11, November 1965, pp 3956-3958.

"Paper chromatography of -substituted derivatives of
1-aryl-3,3-dimethyltriazene."

(4)

CZECHOSLOVAKIA

STERBA, V; SAGNER, Z; MATEKA, M.

Research Institute of Organic Synthesis (Forschungsinstitut
fuer organische Synthesen), Pardubice-Rybitvi (for all)

Prague, Collection of Czechoslovak Chemical Communications,
No 10, 1965, pp 3333-3337

"Diazotization Kinetics of Nitraniline in an Environment of
Hydrochloric Acid."

L 21458-66 DIAAP

ACC NR: AP6001448

SOURCE CODE: PO/0045/65/028/005/0673/0679

AUTHOR: Hennel, J. W.; Jasinski, A.; Sagnowski, S.; Waluga, T.

ORG: Institute of Nuclear Physics, Cracow (Instytut Fizyki Jadrowej)

TITLE: Proton spin lattice relaxation in liquid and vapor phase of hydrogen sulfide

SOURCE: Acta physica polonica, v. 28, no. 5, 1965, 673-679

TOPIC TAGS: spin lattice relaxation, hydrogen sulfide, relaxation time

ABSTRACT: Proton spin-lattice relaxation time T_1 in liquid H_2S and in a H_2S-D_2S mixture containing volume fraction 0.472 of H_2S were measured within the range of temperature from the melting point to the critical point and in the saturated vapor phase from 35C to 104C. In both, liquid T_1 increases at low temperatures and decreases at temperatures above zero C. The predominating role of dipolar relaxation in the liquid at low temperatures is demonstrated. In the saturated vapor phase the ratio of T_1 to density is found to be proportional to $T^{-4.2}$. The authors wish to express their thanks to Dr. J. S. Blicharski for many helpful discussions, to Dr. Janina Janik for preparing the pumice catalyst, and to Mr. S. Moroz for producing the glass apparatus. Orig. art. has: 2 figures and 5 formulas. [Author's abstract.] [KS]

SUB CODE: 20/ SUBM DATE: 21Mar65/ ORIG REF: 003/ OTH REF: 019/

Card 1/1

SAGO, I

Rapid titrimetric determination of silica in fluoride-containing materials I. Sago and L. Berna (*Acta chim. hung.* 1956, 10, 19-25).
 The sample is dissolved in a mixture of conc. HCl and conc. HNO₃ and the solution saturated with finely powdered KCl. The pptd. K₂SiF₆ is filtered on a paper pulp pad, washed free of acid with 50% alcohol saturated with KCl, and then stirred with hot water. The HF produced by hydrolysis is titrated with NaOH to phenolphthalein (total time 6 min.) Insol. fluorides are first fixed with KOH in a silver dish and the mass dissolved in water before adding to the acid. NaF is also added to the solution. The interference caused by Al can be prevented by addition of CaCl₂ or of CaCO₃ to the melt for the insol. fluorides. Results agree well with gravimetric methods.
 A. B. DENSHAM

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Em. m.